Appl. No.: 09/931,631 Filed: August 16, 2001

Atty. Docket No.: RTN-108AUS

## In the Claims

Please amend the claims as set forth in the clean version of the claims set forth below:

1.	(Amended)	A near	object	detection	system	comprising:
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a plurality of sensors, each of the sensors for providing range cell data in a predetermined coverage zone;

a processor, coupled to receive and process the range cell data to provide a processor output coupled to one or more vehicle systems, wherein said processor includes a target tracker portion adapted to maintain a plurality of track information generated by the plurality of target sensors; and

means for sharing information from each of the plurality of sensors.

- 2. (Amended) The system of Claim 1 wherein said processor corresponds to a central sensor processor coupled to each of said plurality of sensors.
- 1 3. (Amended) The system of Claim 1, wherein said processor is provided from a
- 2 plurality of sensor processors, each of the sensor processors disposed in a corresponding
- one of said plurality of sensors; and each of the sensor processors having communication
- 4 means for allowing information to be shared between each of the plurality of sensor
- 5 processors.
- 1 (Amended) A near object detection system for a vehicle, comprising:
- a plurality of sensors, each of the sensors for providing detection coverage in respective coverage zones disposed about a perimeter of the vehicle,
- wherein each of the sensors has a respective predetermined range, angular extent, and velocity range based upon respective coverage zone requirements.



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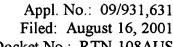
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- 1 3. (Amended) The system according to claim 4 wherein the coverage zones include two
- 2 or more of an adaptive cruise control/night vision zone, a lane keeping zone, a road
- departure zone, a side object detection zone, a backup and parking aid zone, and a stop
- 4 and go zone.

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A near object detection system, comprising:

a plurality of sensors, each of the sensors for providing detection coverage in a predetermined coverage zone;

a multiple hypothesis tracker for processing data from the plurality of sensors to make a hypothesis about data association, resolution, and/or data quality;

a prediction filter coupled to the multiple hypothesis tracker for scheduling the plurality of sensors;

a public track former including a discrimination processor for generating data to control operation of the plurality of sensors;

an estimator/best state vector subsystem coupled to the public track former; and a vehicle control crash management interface coupled to the estimator/best state vector subsystem and to the discrimination processor.



(New) The system according to Claim wherein the predetermined coverage

- 2 zone includes two or more of an adaptive cruise control/night vision zone, a lane keeping
- 3 zone, a road departure zone, a side object detection zone, a backup and parking aid zone,
- 4 and a stop and go zone.

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- 1 % (New) The system of Claim 1, wherein said processor further includes a data
- 2 fuser portion adapted to fuse the plurality of track information into a common filter to
- 3 increase performance of the plurality of target sensors.
- 1 New) The system of Claim 1, wherein the sensors, include at least one of:
- an infrared (IR) sensor and a radar sensor.

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5 (New) The system of Claim wherein the radar sensor comprises: 1 a transmit antenna for transmitting an FMCW frequency in a plurality of transmit 2 beams; and 3 a receive antenna for receiving the FMCW frequency in a plurality of receive 4 beams, which, in combination the transmit beams, provides a pre-determined coverage 5 6 zone. (New) The system of Claim No, having at least one transmit beam and at least 1 one receive beam. 2 (New) The system of Claim N, wherein the predetermined coverage zone has 1 zone characteristics, at least one of which can be statically changed. 2 13 (New) The system of Claim N wherein at least one of the zone characteristics 1 can be dynamically changed to provide an alteration of a time period upon which the 2 target sensor processes a particular transmit beam and a particular receive beam. 3 10 (New) The system of Claim wherein said processor is provided from a central N 1 processor. 2 11

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(New) The system of Claim, wherein said processor comprises two or more

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distributed processors.

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